

CLAIM AMENDMENTS

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for reducing exposure times of high density patterns on a photomask, comprising:

moving at least a portion of a selected feature from a first pattern file to a second pattern file, the at least a portion of the selected feature located in a cell between a first boundary and a second boundary;

wherein moving at least a portion of the selected feature includes reducing dimensions of the cell in the first pattern file to form a reduced cell that excludes the at least a portion of the selected feature; and

exposing a resist layer of a photomask blank with the first pattern file by using a step and repeat technique.

2. (Original) The method of Claim 1, further comprising:
exposing the resist layer with the second pattern file; and
developing the resist layer to form the cell and the selected feature.

3. (Original) The method of Claim 1, wherein the step and repeat technique comprises:

processing data associated with the cell from the first pattern file;
dividing the cell into a plurality of sections; and
individually exposing the sections in the resist layer until the cell is completely formed in the resist layer.

4. (Original) The method of Claim 1, further comprising the cell including a plurality of features located inside of the second boundary.

5. (Currently Amended) The method of Claim 1, wherein moving at least a portion of the selected feature comprises:

~~reducing dimensions of the cell in the first pattern file to form a reduced cell that excludes at least a portion of the selected feature; and~~

inserting a blocking feature into the second pattern file, the blocking feature corresponding in size to the reduced cell in the first pattern file.

6. (Currently Amended) The method of ~~Claim 5~~ Claim 1, wherein the reducing comprises moving the first boundary to correspond with the second boundary.

7. (Original) The method of Claim 5, further comprising the blocking feature operable to prevent the resist layer from being exposed in an area inside the second boundary.

8. (Original) The method of Claim 1, further comprising the second boundary located inside of the first boundary, the first and second boundaries separated by approximately one micron to approximately ten microns.

9. (Original) The method of Claim 1, further comprising the selected feature including a design feature and an optical proximity correction associated with the design feature.

10. (Original) A method for fabricating a photomask, comprising:
providing a photomask blank that includes a resist layer;
moving a plurality of optical proximity correction (OPC) features from a first pattern file to a second pattern file, the OPC features respectively located between an outer boundary and an inner boundary for a plurality of cells in an array;
exposing the resist layer of the photomask blank with the first pattern file by using a step and repeat technique;
exposing the resist layer with the second pattern file; and
developing the resist layer to form the array and the OPC features.

11. (Original) The method of Claim 10, wherein the step and repeat technique comprises:
processing data associated with a selected cell from the first pattern file;
dividing the selected cell into a plurality of sections;
sequentially exposing the sections from the selected cell with the first pattern file; and
repeating the processing, dividing and exposing steps for each of the cells in the array until the cells are exposed in the resist layer.

12. (Original) The method of Claim 10, wherein moving the OPC features comprises:
reducing dimensions of the cells in the first pattern file to form respective reduced cells that exclude the OPC features; and
inserting a plurality of blocking features into the second pattern file, the blocking features corresponding in size to the reduced cells and preventing respective portions of the resist layer from being exposed inside the inner boundary.

13. (Original) The method of Claim 12, wherein reducing the dimensions of the cells comprises moving the outer boundary to correspond with the inner boundary.

14. (Original) The method of Claim 10, wherein moving the OPC features comprises replacing the OPC features in the first pattern file with a plurality of blocking features.

15. (Original) The method of Claim 10, further comprising the outer and inner boundaries separated by approximately one micron to approximately ten microns.

16. (Original) The method of Claim 10, further comprising moving a plurality of design features associated with the OPC features from the first pattern file to the second pattern file.

17-23. (Cancelled).

24. (Previously Presented) A method for reducing exposure time of high density patterns on a photomask, comprising:

moving at least a portion of a selected feature from a first pattern file to a second pattern file, the at least a portion of the selected feature located in a cell between an inner boundary and an outer boundary;

inserting a blocking feature into the second pattern file, the blocking feature defined by the inner boundary of the cell in the first pattern file; and

exposing a resist layer of a photomask blank with the first pattern file by using a step and repeat technique.

25. (Previously Presented) The method of Claim 24, further comprising:

exposing the resist layer with the second pattern file, the blocking feature operable to prevent respective portions of the resist layer from being exposed inside the inner boundary; and

developing the resist layer to form the cell and the selected feature.

26. (Previously Presented) The method of Claim 25, wherein exposing the resist layer comprises printing the cell and the selected feature in the resist layer using a laser writer.

27. (Previously Presented) The method of Claim 24, further comprising:
the selected feature including a first portion located between the inner boundary and the outer boundary and a second portion located inside the inner boundary; and
moving the first portion of the selected feature from the first pattern file to the second pattern file.

28. (Previously Presented) The method of Claim 24, further comprising the selected feature including a design feature and an optical proximity correction associated with the design feature.

29. (Previously Presented) The method of Claim 24, further comprising the outer and inner boundaries separated by approximately one micron to approximately ten microns.

30. (Previously Presented) The method of Claim 24, further comprising the second pattern file including at least one peripheral feature.